What is claimed is:

1. An NMR analyzer comprising a split-type multi-layer cylindrical superconducting coil system horizontally arranged in a cryostat, a first space formed penetrating through the split-type multi-layer cylindrical superconducting coil system, and a second space formed in the split gap.

2. The NMR analyzer according to claim 1, wherein a ratio of the maximum empirical magnetic field to the central magnetic field is not larger than 1.3.

3. The NMR analyzer according to claim 1, further comprising a shim coil arranged in said second space.

4. An NMR analyzer comprising a split-type multi-layer cylindrical superconducting coil system horizontally arranged in a cryostat, a first space formed penetrating through said split-type multi-layer cylindrical superconducting coil system, a second space formed in said split gap, and a third space intersecting said second space.

5. An NMR analyzer wherein a first room-temperature space is formed penetrating through a cryostat along a center axis of a split-type multi-layer cylindrical superconducting coil system which has a ratio of the maximum empirical magnetic field to the central magnetic filed of not larger than 1.3 and is horizontally arranged such that the center axis of the coil is in the horizontal direction, a room-temperature shim coil system is arranged in said first room-temperature space to

improve the homogeneity of the magnetic field, a second room-temperature space is formed penetrating through the cryostat and passing through the center of said split gap in the vertical direction, and a sample to be measured and an NMR probe having a solenoid-type probe coil are inserted in said second room-temperature space.

6. An NMR analyzer wherein a first room-temperature space is formed penetrating through a cryostat along a center axis of a split-type multi-layer cylindrical superconducting coil system which has a ratio of the maximum empirical magnetic field to the central magnetic filed of not larger than 1.3 and is horizontally arranged such that the center axis of the coil is in the horizontal direction, a room-temperature shim coil system is arranged in said first room-temperature space to improve the homogeneity of the magnetic field, a second room-temperature space is formed penetrating through the cryostat and passing through the center of said split gap in the vertical direction, a sample to be measured is inserted in said second room-temperature space, a third room-temperature space is formed penetrating through the cryostat and intersecting said first room-temperature space at right angles thereto, and an NMR probe having a solenoid-type probe coil is arranged in said space.

7. An NMR analyzer wherein a first room-temperature space is formed penetrating through a cryostat along a center axis

of a split-type multi-layer cylindrical superconducting coil system which has a ratio of the maximum empirical magnetic field to the central magnetic filed of not larger than 1.3 and is horizontally arranged such that the center axis of the coil is in the horizontal direction, a room-temperature shim coil system is arranged in said first room-temperature space to improve the homogeneity of the magnetic field, a second room-temperature space is formed penetrating through the cryostat and passing through the center of said split gap in the vertical direction, and a sample to be measured and an NMR probe having a solenoid-type probe coil are inserted in said second room-temperature space, wherein said first room-temperature space is further provided with a system for irradiating electromagnetic waves of wavelengths of not loner than 0.1 mm.

8. An NMR analyzer wherein a first room-temperature space is formed penetrating through a cryostat along a center axis of a split-type multi-layer cylindrical superconducting coil system which has a ratio of the maximum empirical magnetic field to the central magnetic filed of not larger than 1.3 and is horizontally arranged such that the center axis of the coil is in the horizontal direction, a room-temperature shim coil system is arranged in said first room-temperature space to improve the homogeneity of the magnetic field, a second room-temperature space is formed penetrating through the

cryostat and passing through the center of said split gap in the vertical direction, a sample to be measured and an NMR probe having a solenoid-type probe coil are inserted in said second room-temperature space, and a third room-temperature space is formed penetrating through the cryostat and intersecting the first room-temperature space at right angles thereto.

9. The NMR analyzer according to claim 5, wherein the third room-temperature space is provided with a system for irradiating electromagnetic waves having wavelengths of not larger than 0.1 mm, or with a system for irradiating electromagnetic waves having wavelengths of not larger than 0.1 mm and with an electromagnetic wave detection system.

10. The NMR analyzer according to claims 5 to 9, wherein the magnetic field at the center of the coil is not smaller than 11.5 T.

11. The NMR analyzer according to claims 5 to 10, wherein the overall height of the apparatus is not larger than 2.0 m.

12. The NMR analyzer according to claims 7 and 9, wherein the electromagnetic waves are any one kind of, or a plurality of kinds of, far infrared rays, infrared rays, visible rays, ultraviolet rays, X-rays and γ-rays.

13. The NMR analyzer according to claims 5 to 12, wherein the distance along the center axis is not larger than 1.5 m between the floor surface and the split-type multi-layer cylindrical superconducting coil system horizontally arranged

in a manner that the center axis of the coil thereof is in the horizontal direction.